REMARKS

Claims 1-55 are pending in the application.

Claims 1-55 stand rejected.

Claims 30, 32, 36, 42, 48 and 54 have been cancelled.

Claims 1-2, 6, 11, 16-17, 21-22, 26-27, 33, 38-41, 43-47, 49-51, 53 and 55 have been amended.

Rejection of Claims under 35 U.S.C. §112

Claims 38-49 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Applicants wish to thank the Examiner for the Examiner's meticulous review of the claim language. Applicants have cancelled claims 42 and 48, and have amended claims 38-41, 43-47 and 49, and believe the Examiner's concerns to be addressed thereby.

Rejection of Claims under 35 U.S.C. § 102

Claims 1-55 stand rejected under 35 U.S.C. § 102(e) as being unpatentable over Greef, et. al., U.S. Patent 6,397,221 (Greef). Applicants respectfully disagree in light of the amendments presented herein.

As an initial matter, Applicants respectfully submit that the above rejection is moot with respect to claims 30, 32, 36, 42, 48 and 54, which have been cancelled.

As to the remaining claims, Applicants respectfully submit that independent claims 1, 6, 11, 16 and 21 were not anticipated by Greef, in their previous form. For example, these claims already recited that the attribute is within a first domain with regard to the upper level class. This allows a method of the claimed invention, for example, to recognize a situation in which the first attribute's domain is not appropriate for a lower level class object to inherit, and so should be superceded. The recognition of such situations is not contemplated by Greef. In fact, Greef is focused on the use of attributes to distinguish between Greef's frames. (col. 12, lines 23-52) Thus, in failing to recognize the advantages of such an approach, Greef failed to anticipate the invention as claimed previously.

However, in order to more clearly highlight these distinctions, claims 1, 6, 11, 16 and 21 have been amended to recite limitations which illustrate, upon the inheritance of an attribute by a lower level class, the attribute's restriction to a domain value set that is smaller than that which the attribute was within in the upper level class. For example, claim 1 now recites, in pertinent part:

"...

the attribute is within a second domain with regard

to the lower level class,

a second domain value set of the second domain is

smaller than a first domain value set of the first domain,

and

the attribute is restricted to the second domain value

set upon the inheriting."

Thus, the attribute is within a first domain value set when the attribute is assigned to the upper level class (i.e., the attribute can assume a certain set of values, when taken in the context of the upper level class). However, when the attribute is inherited, and so is then within the second domain (that of the lower level class), the attribute is restricted to the second domain value set (i.e., the set of values that the attribute can assume, when taken in the context of the lower level class). As recited, the second domain value set is smaller than the first domain value set, and so the values that the attribute can assume are thus restricted when the attribute is inherited by the lower level class.

It will be noted that cancelled claims 30, 36, 42, 48 and 54 previously recited limitations similar to those discussed above, and Applicants respectfully submit that the limitations now recited in independent claims 1, 6, 11, 16 and 21 simply bring out this distinction in greater relief. The present Office Action rejected claims 30, 36, 42, 48 and 54, which recited, in pertinent part "restricting the first domain value set to the second domain value set" or substantially similar limitations, in light of Greef (col. 12, lines 35-50). Greef states, at col. 12, lines 32-52:

Following definition and assignment of the specific product frame attributes, the program as shown in FIG. 20 advances processing to step 514 at which the specific frame attributes are promoted into the frame hierarchy from the product frame level to finalize the hierarchical structure 434. To accomplish this, the method includes an iterative step 516 having branches 518 and 520. To promote frame attributes into the hierarchy, the program at step 514 goes to the lowest level in the hierarchy; i.e., the

product frame level 446, <u>identifies child frames of a common parent</u> <u>frame</u>, and further, <u>identifies attributes that are common to all such child</u> <u>frames. The program then advances the identified common child attributes</u> <u>to the parent frame; i.e., next highest frame to which they are associated in</u> <u>the next highest hierarchical level.</u> Thereafter, processing advances from step 514 to 516 and commonality is again assessed to determine whether any other child frames exist having a common parent, and whether those child frames have common attributes which are subject to promotion. If child frames with common attribute exist, processing loops back from step 516 over path 518 to promotion step 514." (emphasis supplied)

Thus, the process described in the above passage promotes common child attributes up to their highest hierarchical level by identifying attributes that are common to all child frames of a given parent frame. This process is antithetical to that of the claimed invention.

The claimed invention, by contrast, takes an attribute assigned to an upper level class having a first domain value set, and upon the attribute being inherited by a lower level class, restricts that attribute to a second domain value set that is smaller than the first domain value set. The claimed invention thus works from an upper level, downward (and not the reverse, as in Greef). Furthermore, the claimed invention works to restrict the attribute to a domain value set that is appropriate to the lower level class inheriting the attribute (unlike Greef, which seeks to expand the attributes at a given point in the hierarchy by promoting each child attribute into the hierarchy as high as is possible).

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Still further, it will be appreciated that the claimed invention recites the restriction of an attribute's <u>domain value set</u> (i.e., the <u>values</u> that the attribute is allowed to assume), as a result of the attribute being <u>inherited</u>. In contrast, the cited section of Greef teaches a decision regarding the <u>promotion</u> of <u>attributes</u> to the highest possible hierarchical level. Applicants therefore respectfully submit that claims 30, 36, 42, 48 and 54 would have been allowable for the foregoing reasons, and that independent claims 1, 6, 11, 16 and 21 are therefore allowable in light of this fact.

Applicants also respectfully note that the rejections of claims 29, 35, 41, 47 and 53 in the present Office Action were also not well-founded. Claim 29 recites, in pertinent part:

"...

superceding the attribute with the another attribute,
wherein

the superceding is performed if the second
domain is different from the first domain."

Claims 35, 41, 47 and 53 recite substantially similar limitations, as do amended claims 2, 17 and 22. Claims 35, 41, 47 and 53 were rejected in the present Office Action in light of Greef, at col. 12, lines 15-22. Greef states, at col. 12, lines 16-23:

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"Thereafter, once the generic attributes have been defined and associated, at step 510, the program would advance processing to step 512, in order to create and associate the specific attributes and attribute values contained in table 400 for the products with the respective product frames in structure 434. In this regard, only products [sic] attributes having values for the respective products would be associated with those products." (emphasis supplied)

First, the passage above simply teaches that specific attributes and attribute values are created and associated with the respective product frames. In no way can the above passage be read to teach the superceding of one attribute by another attribute. In fact, nowhere in the cited portion of Greef, nor anywhere else in Greef, are Applicants able to find such a teaching.

Moreover, the above passage fails to appreciate the problems solved by the claimed invention, and in so doing, actually teaches away from the claimed invention. Greef states that "only products [sic] attributes having values for the respective products would be associated with those products", indicating that if an attribute in Greef's system has values that are inappropriate for a given product, that attribute is simply not associated with the product.

In contrast, an advantage of the present invention is its ability to use only the values of a given attribute that are appropriate for a given object. Thus, if an attribute of an upper level class is inherited by an object in a lower level class, and certain values that the attribute can assume (the domain value set of the domain of the upper level class) are

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not appropriate to the lower level class (the domain value set of the domain of the lower level class is smaller than that of the upper level class), the attribute is restricted to values that are appropriate to the lower level class (the values that the attribute is allowed to assume is restricted to the domain value set of the lower level class). The claimed invention's solution in this scenario is to allow an object in a lower level class to inherit an attribute, and then simply restrict the values that the attribute is allowed to assume, rather than to prevent the object from inheriting the attribute at all (as in Greef). This recognizes that an attribute can have some values that are appropriate for a given object, and some values that are not (again, an issue that Greef fails to recognize).

For at least the foregoing reasons, Applicants respectfully submit that the invention, as claimed in amended independent claims 1, 6, 11, 16 and 21, is not anticipated (or made obvious) by Greef. Applicants further respectfully submit that claims 2-5, 7-10, 12-15, 17-20, 22-29, 31, 33-35, 37-41, 43-47, 49-53 and 55, which depend from independent claims 1, 6, 11, 16 and 21, are also not anticipated or made obvious by Greef for at least the foregoing reasons. Applicants therefore respectfully submit that claims 1-29, 31, 33-35, 37-41, 43-47, 49-53 and 55 are in condition for allowance.
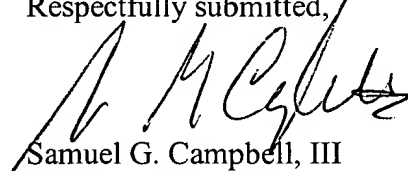
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CONCLUSION

In view of the amendments and remarks set forth herein, the application is believed to be in condition for allowance and a notice to that effect is solicited. Nonetheless, should any issues remain that might be subject to resolution through a telephonic interview, the Examiner is invited to telephone the undersigned at 512-439-5084.

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